U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE
NATIONAL METEOROLOGICAL CENTER

OFFICE NOTE 63

FMARKIV AND PEPMERG DATA TAPES

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This is an unreviewed manuscript, primarily intended for informal exchange of information among NMC staff members

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DATA AUTOMATION DIVISION
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FMARKIV and PEPMERG Data Tapes

Two sets of tapes (fourteen each - referred to hereafter as SET A and SET B) have been set aside at the National Oceanic and Atmospheric Administration's (NOAA) CDC 6600 computer site in Suitland, Maryland. They contain grid and observational data from the National Meteorological Center's (NMC) operational runs.

SET A tapes contain the guess fields, and abbreviated[1] observational data nominally dumped at 2+00 hours after 00Z and 12Z. These data are used as input to the Limited-area Fine-mesh Model (LFM). The analysis and forecast fields thru 24 hours produced by the LFM analysis and forecast programs are also on the SET A tapes.

SET B tapes contain the guess fields, and abbreviated[1] observational data (with nominal dump at 3+25 hours after 00Z and 12Z) that are used as input to the main operational (OPNL) run. The analysis and forecast fields (thru 48 hours at 12Z and 84 hours at 00Z) produced by the OPNL analysis and forecast programs, and the complete[2] observational data available for this run are also on the SET B tapes.

Both sets of tapes are cycled with the operational runs so that last week's tapes are overwritten by this week's data. In the normal course of events, a particular day's data is available for one week at the NOAA CDC 6600 computer site and for one month in NMC's local archives at Suitland, Maryland.

SET A and SET B tapes are externally identified as follows:

SET A --

FMARKIV	00Z (12Z)	MONDAY (TUESDAY...SUNDAY)

SET B --

PEPMERG	00Z (12Z)	MONDAY (TUESDAY...SUNDAY)

These tapes must be requested as SCOPE labelled tapes; for example,

REQUEST,TAPE,HI,E. FMARKIV (PEPMERG) FOR 00Z (12Z) MONDAY (TUESDAY..etc.)

The end of information is indicated by multiple (consecutive) ends of files. At the termination of an abnormal operational run, all data files are not currently guaranteed to be on the FMARKIV or PEPMERG tapes. Users are urged

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1. abbreviated - File contains parameters for analysis programs only.
2. complete - File contains all the information from the upper-air and surface reports for this collection (see NMC Office Note 29).

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to search for a particular file by its logical file name.[3] For a particular record within a file the user should search by its identification[4] since the order of records within a file is variable and cannot be guaranteed. This applies to binary files and not to coded files. Searching by file name and/or record identification reduces program changes when new information is added to the tapes.

The format of the tapes is given in appendices 1 and 2.

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3. The logical file name is contained in the first (1st) record of the file. See NMC Office Note 44 for the format of this record.
4. A description of record identifiers is given in NMC office Note 28.

Appendix 1

FMARKIV TAPE

Logical File Name[1] and Type of File	Contents	Status
GES (Binary)	LFM guess fields	Active (Public)
ADPSFC (Coded)	Complete SURFACE land observations -- Currently includes SFCBOG, and SFCSHP	Active (Public)
SFCBOG (Coded)	Manually inserted SURFACE data	Proposed
SFCSHP (Coded)	SURFACE SHIP reports	Proposed
SFCPAP (Binary)	Abbreviated SURFACE observations	Active (Internal[2])
ADPUPA (Coded)	Complete UPPER-AIR RADIOSONDE and WIND reports -- Currently includes UPABOG, SIRSOB, and AIRCFT	Active (Public)
UPABOG (Coded)	Manually inserted UPPER-AIR data and ATS WIND estimates	Proposed
SIRSOB (Coded)	SATELLITE soundings	Proposed
AIRCFT (Coded)	AIRCRAFT and RECONNAISSANCE reports	Proposed
NEWPAP (Binary)	Abbreviated UPPER-AIR observations	Active (Internal[2])
FMANL (Binary)	LFM analyzed fields	Active (Public)
FMØØ (Binary)	LFM initialized fields	Active (Public)
FM12 (Binary)	LFM 3, 6, 9, and 12 hour[3] forecast fields	Active (Public)
FM24 (Binary)	LFM 15, 18, 21, and 24 hour[3] forecast fields	Active (Public)
END OF FILE		
END OF FILE		

1. See footnote 3, page 2.
2. Documentation available if required.
3. Output not necessarily the same for each forecast hour.

Appendix 2

PEPMERG TAPE

Logical File Name[1] and Type of File	Contents	Status
GES (Binary)	OPNL guess fields	Active (Public)
OLDPAP (Binary)	Abbreviated UPPER-AIR observations, 12 hours old.	Active (Internal[2])
ADPSFC (Coded)	Complete SURFACE land observations--Currently includes SFCBOG, and SFCSHP	Active (Public)
SFCBOG (Coded)	Manually inserted SURFACE data	Proposed
SFCSHP (Coded)	SURFACE SHIP reports	Proposed
SFCPAP (Binary)	Abbreviated SURFACE observations	Active (Internal[2])
ADPUPA (Coded)	Complete UPPER-Air RADIOSONDE and WIND reports--Currently includes UPABOG, SIRSOB, and AIRCFT	Active (Public)
UPABOG (Coded)	Manually inserted UPPER-AIR data and ATS WIND estimates	Proposed
SIRSOB (Coded)	SATELLITE soundings	Proposed
AIRCFT (Coded)	AIRCRAFT and RECONNAISSANCE reports	Proposed
NEWPAP (Binary)	Abbreviated UPPER-AIR observations	Active (Internal[2])
MRGPAP (Binary)	Combined OLDPAP and NEWPAP	Active (Internal[2])
ANL (Binary)	OPNL analysis fields	Active (Public)
FØØ (Binary)	OPNL initialized fields	Active (Public)
F12 (Binary)	OPNL forecast fields at 3, 6, 9, and 12 hours[3]	Active (Public)
F24 (Binary)	OPNL forecast fields at 15, 18, 21, and 24 hours[3]	Active (Public)
F36 (Binary)	OPNL forecast fields at 27, 30, 33, and 36 hours[3]	Active (Public)
F48 (Binary)	OPNL forecast fields at 42 and 48 hours[3]	Active (Public)
F6Ø (Binary)--00Z only	OPNL forecast fields at 60 hours[3]	Active (Public)
F72 (Binary)--00Z only	OPNL forecast fields at 72 hours[3]	Active (Public)
F84 (Binary)--00Z only	OPNL forecast fields at 84 hours[3]	Active (Public)
END OF FILE END OF FILE		

1. See footnote 3, page 2.
2. Documentation available if required.
3. Output not necessarily the same for each forecast hour.